



VFSK 5 Signalling and Communication Device



Certificate: ATEX, Po



SKK control cabinet

Use:

VFSK 5 is used for wireless signalling and communication between a transport vessel (vessels – 2 vessels as standard) and a mining machine operator. It is particularly used for shafts of deep mines for heavy machinery with a tail rope and without it. The device is made as I M2 Ex ib I model.

Description:

The VFSK5 signalling and communication device is divided to two basic parts:

- surface part
- mine part

Surface part consists of the following components:

- SA-22 type coupling elements
- RM1-VFSK5 switchboard cabinet
- OS-01 control cabinet
- SH-01 leg switch
- MIC listening in to the signalisation

Mine part consists of the following components:

- VAM and VAV type coupling elements
- SSEi60-OM terminal block and separation cabinet
- SSEi30-OM terminal block cabinet
- SKK communication module
- OS-ia-4 control cabinet
- LS-01-B battery

Description of individual components:

- SA-22, VAM, VAV: serve for establishing a high frequency signal to the hauling rope
- RM1-VFSK5: the switchboard cabinet houses a transmitter/receiver, control unit and input/output circuits.



OS-01 cabinet

Technical parameters of mine components:

Model	I M2 Ex ib I
Supply voltage	10 – 14 V – battery
Battery endurance	1 week
Number of binary inputs	4
Protection	IP65
Dimensions	See the User Manual

Technical parameters of surface components:

Model SA-22	I M2 Ex ib I
Supply voltage	230VAC (TN-S or IT)
Number of binary inputs	6
Number of binary outputs	8 (8x2 switchover contacts)
Protection of RM1-VFSK5	IP54
Protection of SA-22	IP65
Protection of OS-01, SH-01, MIC	IP30
Dimensions	See the User Manual

- OS-01: On the cabinet there are LEDs informing about the status of connection with the mine part, statuses of input signals in the mine part (Stop binary signal, Wire line thimble, Door + bridge, Warning) and the status of battery discharge in the transport vessel. It also contains a loudspeaker and microphone for communication with the vessel.
- SH-01: A leg switch is connected to OS-01 and enables speaking towards the transport vessel.
- MIC: A microphone performs listening to the issued signals and transmits the acoustic signal back to the transport vessel (SKK).
- SSEi60-OM: A cabinet with terminals and separated coupling elements.
- SSEi30: A cabinet with terminals – interconnecting cabinet.
- OS-ia-4: A cabinet for issuing signals and/or STOP signal.
- SKK: The unit contain a transmitter/receiver, loudspeakers, microphone and keyboard with signal LEDs. Various statuses are signalled, see the User Manual. 4 binary inputs are led to SKK (the status of the signal pushbutton, the status of the wire line thimble contact, the status of the door + bridge contact, the status of the STOP switch).

After pushing a pushbutton on the keyboard it is possible to speak to the microphone and communicate with the mining machine operator or only send signals.

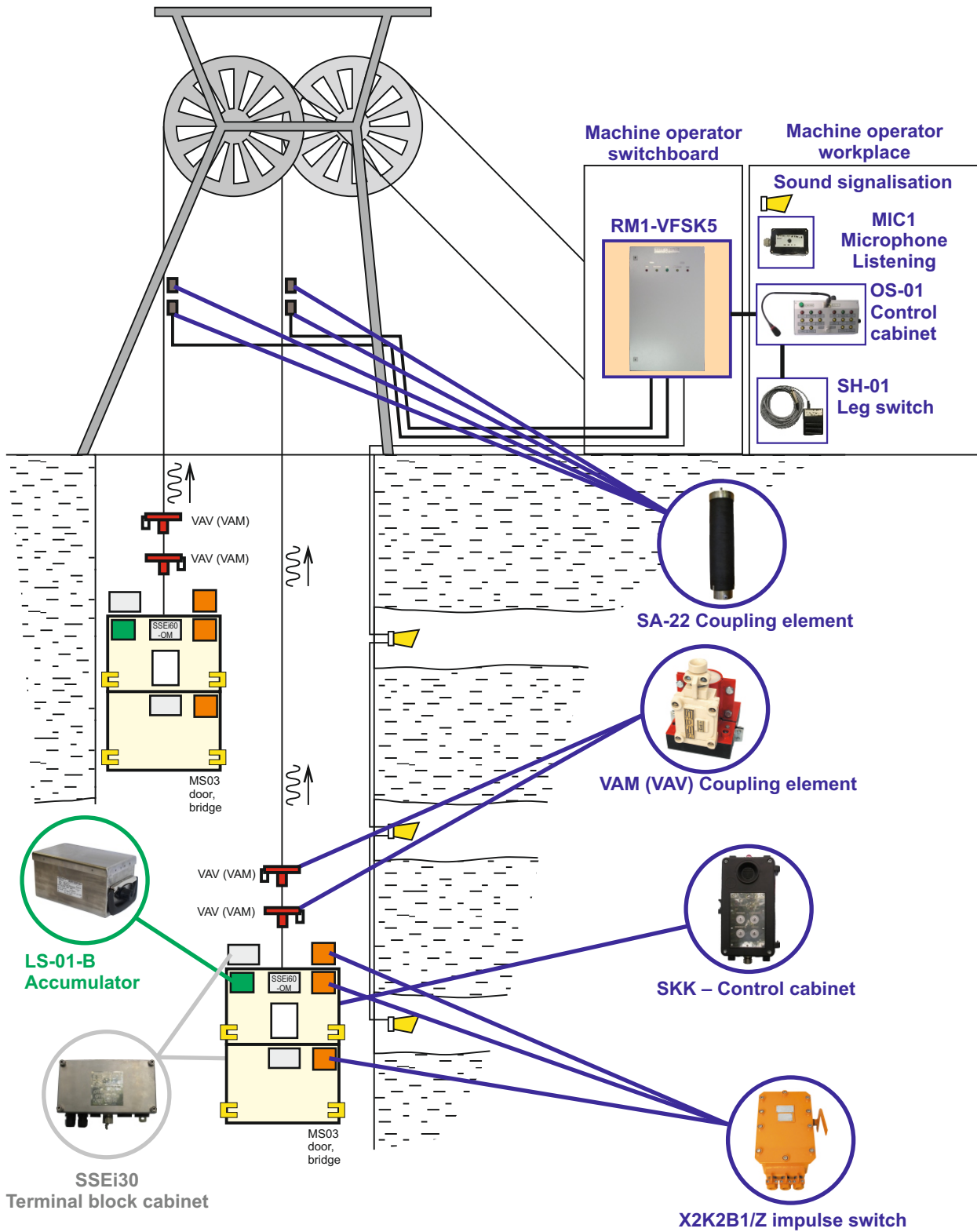
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